

Linear Functions

You work at Target earning \$9.00 per hour.

① write a linear function to represent the total amount of money you earned (y) after working x hours.

② construct a function table for the total amount of money earned after working 1, 2 & 3 hours.

③ is the linear function discrete or continuous?

④ graph the linear function using the table constructed in question #2.

You earn \$2.00 for each basket you make at a craft show.

⑤ write a linear function to represent the total amount of money earned (y) after making x baskets.

⑥ construct a function table for the total amount of money earned after ~~making~~ making 2, 3 & 4 baskets.

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⑦ is the linear function discrete or continuous?

⑧ graph the linear function using the table constructed in question #6.

Answers:

① $y = 9x$

②

x	y	hours worked	\$ earned
1	9	1	9
2	18	2	18
3	27	3	27

③ the linear function is continuous since it is possible to work any part of one hour.
for example, you could work 1.2 hours, 1.5 hours, 6.75 hours.

④ see graph on next page

⑤ $y = 2x$

⑥

baskets made	\$ earned
2	4
3	6
4	8

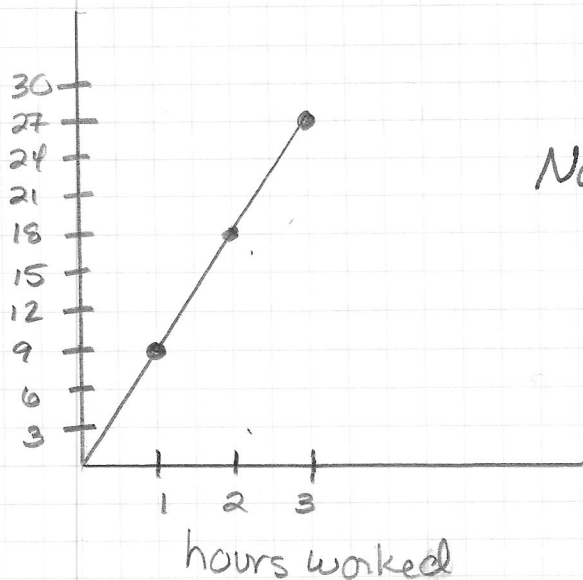
⑦ discrete since you cannot make a part of a basket

⑧ see graph on next page

Answers:

④

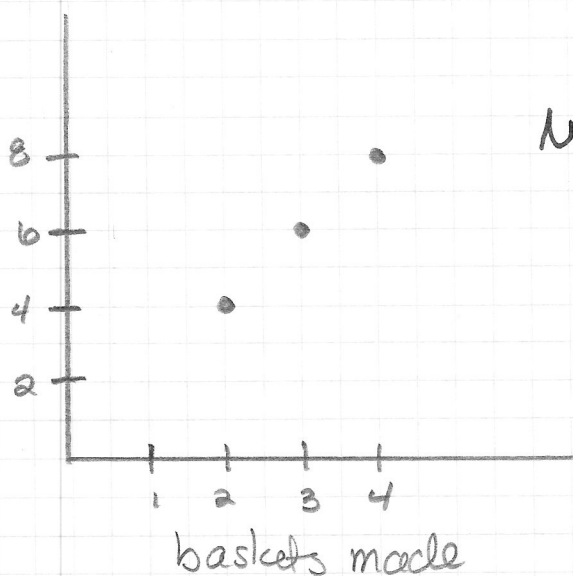
\$
earned



Note: points are connected with a line since the function is continuous. the line includes all the fractions of an hour worked.

⑧

\$
earned



Note: points are not connected with a line since the function is discrete. a line would include fractions of a basket made. but fractions of a basket do not earn you money so they cannot be represented with a line.